



Fall Membership Challenge Drive

Compiled by: Mr. Shiven Ponnupureddy, Chair, Material Advantage @ IITK

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Activity Report (Sept. 12 - Oct. 16, 2022)



Submitted on
October 19, 2022

Recruitment Strategies

- This year MA team came up with a strategy for **Volunteers as Leaders**. COVID has hugely impacted the personal and professional lives of students. In order to revive the enthusiasm amongst the students, we have provided a platform to outshine the capabilities of the volunteer students.
- MA Volunteers were given full **creative freedom** for organising social and fun activities this year. The MA team held various meetings helping the volunteers to formulate and execute their visions for the various events. The joined volunteers were assigned to **publicity and creative leaders** of upcoming MA events. The aim of various events was focused on career, research, social and individual growth. The **membership drive takeaways** included teamwork, leadership, time management qualities, along with overall professional and personal development.
- The MA team aimed for the individual development of volunteers by projecting them as creative leaders of their respective events. Also, the active participants and volunteers were gifted with **membership discounts** for their time and efforts in making the membership drive a huge success.
- We conducted a **plethora of events** involving IIT-Kanpur students across all batches, including Bachelor, Masters and PhD students. The increase in total number of participants and their feedback has indicated growth of MA@IIT-Kanpur.

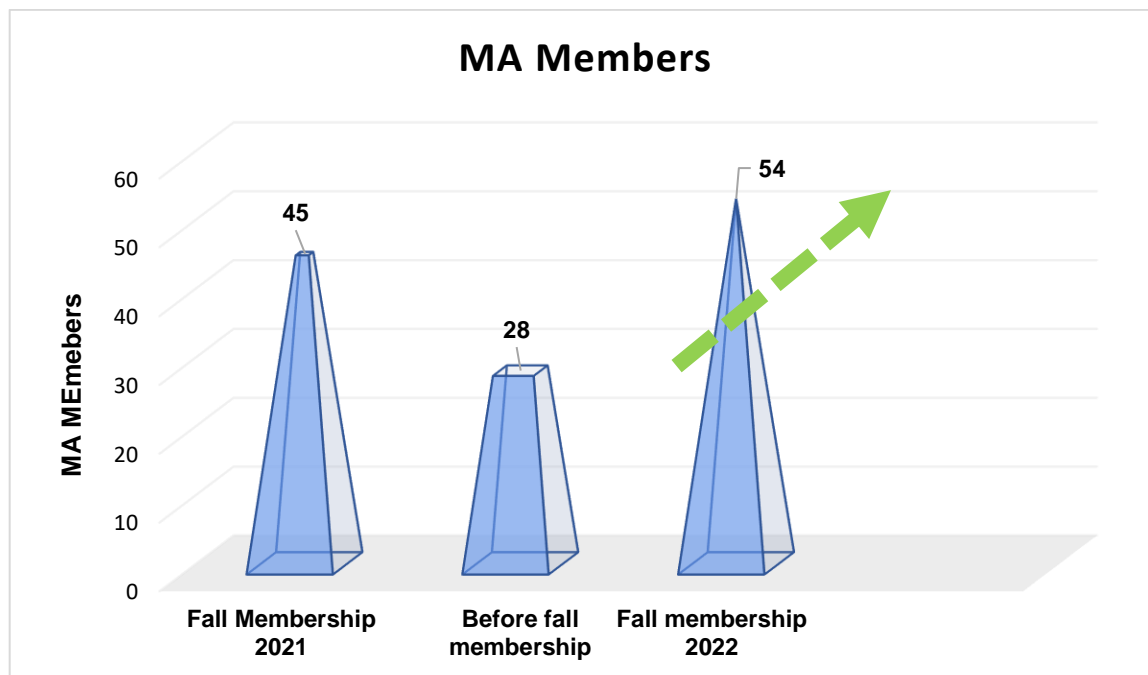
List of events conducted during the *Fall Membership Challenge 2022* drive is as follows

S.No	Event	Date
1.	Unveiling Material Advantage Fall Membership Drive 2022-23	12 September, 2022
2.	Strategizing For Membership Drive with Volunteers	13 September, 2022
3.	Engineers Day	15 September, 2022
4.	Outreach Event at CSJM	16 September, 2022
5.	Happy Hours	25 September, 2022
6.	Symmetry in Nature	22-28 September, 2022
7.	Texture By R.K Ray	27 September, 2022
8.	Industrial Visit to SWASYA	30 September, 2022
9.	Workshop on MATLAB	8 October, 2022
10.	Treasure Hunt	9 October, 2022
11.	LaTeX Workshop	10 October, 2022
12.	Placement Talk	13 October, 2022
13.	Lab Visit (BPCL and SEM)	14 October, 2022
14.	CFD	15 October, 2022
15.	Plantation Drive	16 October, 2022
16.	E-helpdesk for membership	14-16 October, 2022

Outcome of Fall Membership Challenge Drive 2022

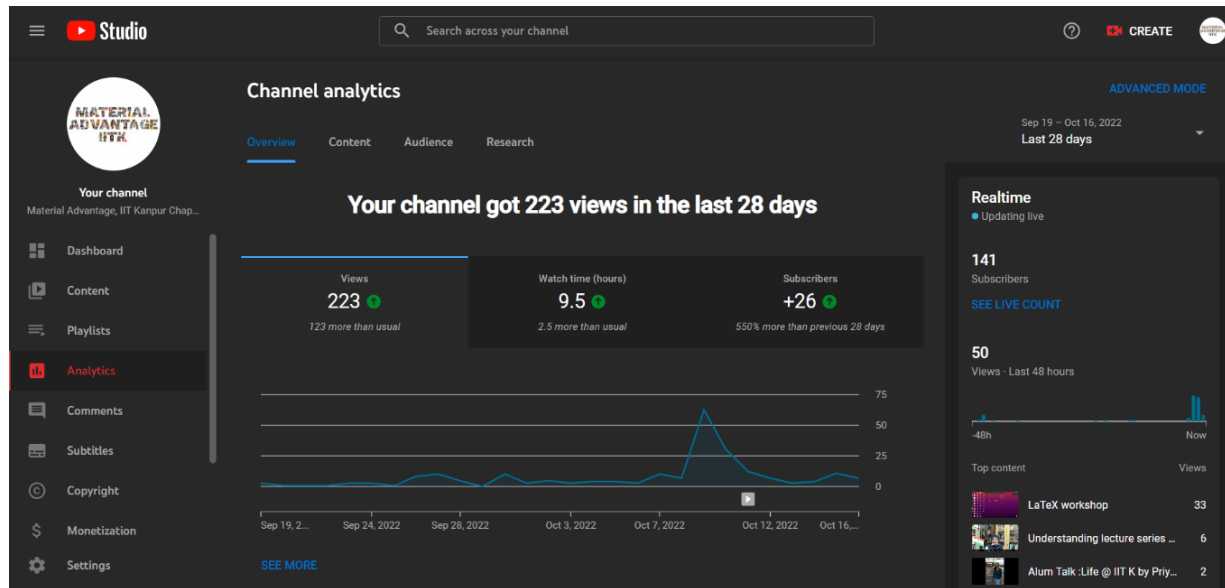
- The major factor that engaged the students, throughout the drive, was that the events were more social and interactive compared to previous couple years. Also, the winners and runner ups were provided with discounted memberships. e-certificates and gifts were also provided to winners of various events and participants of workshops
- The MA @IIT-Kanpur has organized 16 events during the fall-membership drive challenge (Sept. 12 - Oct. 16, 2022). The team worked diligently over the course of more than ten meetings to achieve success. During these meetings, ideas were generated through brainstorming sessions, which subsequently led to the

planning and execution of fruitful events. The events were organized both offline and online via zoom.



- The outcome of our extensive involvement with students resulted in the recruitment of **54 members**, whereas **26 members** are new to MA family. This year, growth of ~93% has been witnessed in recruiting new members.
- During the drive, the MA team manifested its tagline, "**THE ADVANTAGE IS BEYOND MATERIALS**," by having extensive discussions with students of various departments in IIT-Kanpur.
- This year MA@IITK conducted events in outreach students in CSJM where talks were given, and Lab visit to IIT Kanpur are organized.
- As a part of the membership drive, the core team of Material Advantage @ IIT Kanpur extensively shared information, updates, and reminders regarding various events and updates to the student community on social media. This campaign was later expanded with the help of volunteers, increasing student participation. We also created hashtags **#mamembershipdrive2022** **#materialadvantageiitk** **#maiitk**.

- With faster updating of the events on YouTube after the events resulted in increase in subscribers ~550 % in last one month.












- The students who benefited from MA supported our campaign by sharing their experiences and MA as a platform providing constant support to students of the research communities across the globe. The undergraduate students were also made aware of the various scholarships and exchange programs which are offered by member societies. This campaign helped us a lot to motivate students to join material advantage.
- As soon as the membership drive began, the mid-term examinations started. The first creative event was an online photography event “symmetry in nature” to cheer the students under examination pressure. This event aimed to encourage students to refresh from the monotonous study by observing and appreciating the symmetry in the beautiful nature around us.
- Further, the most awaited treasure hunt event had reached the maximum number of participants under 24 hours.
- The volunteers awarded with 50% membership discount for their outstanding efforts. This creative strategy of showcasing the support to volunteers led to the huge expansion of newly recruited MA members. The social reach of MA has also taken positive growth within a short time-span. This year we take a leap

further by utilizing MA as a platform for the collective growth of students by rebuilding the social trust and belongingness that has been lost during the covid period.

- Through all our events, the Chapter has tried to imbibe its tagline among the students of the materials fraternity. Our tagline at MA @ IITK is “The advantage is beyond materials”.

Creativeness and Uniqueness of the drive:

For the past two years due covid pandemic all social interactions and fun activities have been avoided. Fortunately, things are falling back to normal, and students are back to campus. We have initiated for the fun interactive way to promote material advantage and encourage enrolments during the membership encourage membership enrolments during the membership drive through our event “**The Great MA Treasure hunt**”.

		
		
		
Mark the societies which belong to MA society		

Brain:
 $396 \times 42 =$
 $11 \times 999 =$
 $25 \times 445 =$

Body:
 Make a pose like this and
 Click picture

M A



Planned events in the Treasure Hunt

As part of the treasure hunt, we created different levels, each with the spice of materials science and publicizing through the event. This has prompted participants to conduct research on the MA. This sparked the scientific temper and encouraged participants to become members.

Since our aspiration was to convert participants into members, we have added events which focused on the following.

- Events planned to focus in finding things related to materialistic things of different class of materials ranging from aluminum tins to nylon umbrellas which infuses importance of different materials
- Clicking photos in the shape of MA by participants, indirectly publicizes the MA.
- Quizzes were structured to people to search about societies associated by Material Advantage. This in helps in understanding the true advantage of material advantage.

01. Unveiling the fall membership drive 2022-2023 on Sept 12, 2022 Speakers: Shiven and Team

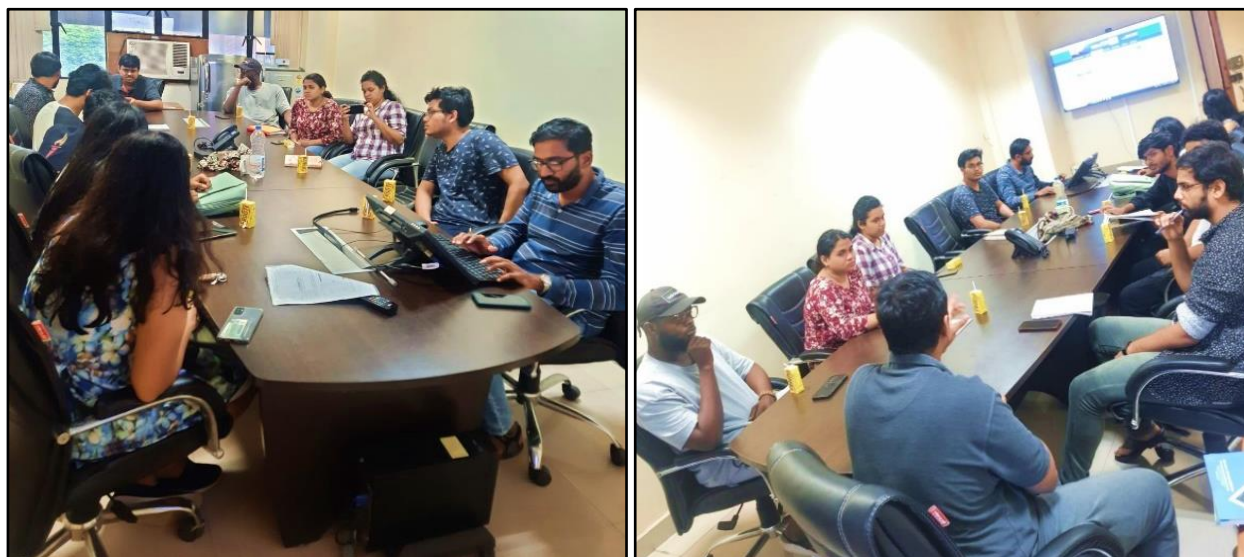
The orientation to MA@IITK was conducted for introducing the newer students of IITK to the benefits of MA. The introductory talk was given by the Chair of MA@IITK Mr. Shiven P. He briefed about every aspect of Material advantage and how it is associated with prominent societies: ACerS, AIST, ASM International, and TMS. He explained how advantage is beyond materials in Material Advantage. He also talked about how tremendously Material Advantage@ IIT Kanpur chapter growing in the global scale. Later, team members of the core team introduced the website, social media by Pareena, Nandini and Anandh, respectively. Followed by the membership advantages and scholarships by Pranjal. The Membership drive was kicked off with unveiled by Sruthi which followed by launching the first event of membership drive this event.

Finally, speech was given by Mrs. Shruti Dubey (ex-chair of MA) her journey in MA and shared best wishes. Over 50+ participants from various departments and programs joined the session and clarified their queries regarding MA@IITK.



02. Strategizing for membership drive with volunteers Sept 13, 2022

During Membership drive MA@IITK chapter also recruit volunteers. So, we organize one meeting so that all the volunteers can understand their responsibility. In which we discussed that what should be our strategy during drive. The main motive of this meeting was to make understand to volunteers that how MA works. And to publicize all the upcoming events.



03. Engineers Day was celebrated on Sept 15, 2022

This Engineers day MA@IITK chapter organizes an event at PRAYAS IIT Kanpur. The motive of this event was to bring smile on the coming engineer's faces that is Prayas students. Contribution was taken from all the willing students. Gifts (Copies, pens and chocolates) were distributed among 85 students of Prayas. It was very happy moment that MA@IIT Kanpur chapter was the reason of these happy faces.

On This Engineer's Day
Contribute For Better Future
Meet them & distribute gifts

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 IIT KANPUR

Scan to Donate

CONTACT TEAM MA:
 Pranjal : 9451641659
 Pooja : 9044890157
 UPI : 9451641659@upi

VENUE:
 PRAYAS, DAT (IIT K)
DATE: SEPT'15
TIME : 6 PM



04. Outreach Event at CSJM University, Kanpur on Sept 16, 2022 Speaker: Mr. Sawan Dubey, Murli Manohar, Mohd Aman

On September 16, Material advantage IIT Kanpur has organized a outreach event on CSJM Kanpur. We had an energetic speakers Ph.D research scholars of IIT Kanpur **Mr. Sawan Dubey, Murli Manohar, Mohd. Aman.** The speaker mentored students on Knowledge on Life of Research Scholar, XRD, SEM aing the basic characterization techniques. The session started with a presentation that followed the Q& A of the students. This event was an interactive event that lasted for 1 hours, with more than 30 attendees.



05. Happy Hours on Sept 25, 2022

Apart from lectures, virtual events, workshops, Material Advantage @IITK chapter has also organize one happy hour event. Motive of this event was to lowers the gap between junior and seniors. MA @IITK chapter got the opportunity to arrange for a Get-together or we can say 'Chai Pe Charcha' (*discussion at tea*). Total 14 MA members joined for this happy hour. It was overwhelming to see that everyone took out time from their busy schedule and enjoyed a lot.



06. Symmetry in Nature from 22 to 28 Sept, 2022

MA@ IITK organised a refreshing event for students during the mid-examination as part of the fall membership drive. Many students took part and shared photos taken at college. Participants in the event shared photographs of trees, flowers, and leaves, emphasising their inherent symmetry. All the photos were shared on the MA@IITK Chapter's official Facebook page. The winner was chosen, based on the highest number of likes, comments, and shares on the Facebook page. The Winner received a membership discount and a prize.



07. Talk on "Unravelling the misconceptions between morphological and crystallographic texture" 27 Sept 2022

Speaker : Dr. R K Ray

MA@IIT K has organised a discussion with a former professor from IIT Kanpur's Department of Materials Science and Engineering. Dr. R K Ray gave a talk on "Unraveling the Misconceptions Between Morphological and Crystallographic Texture" on September 27. The speaker is regarded as the best in the field of texture in India and around the world. The speaker led the event by explaining the basics of texture, its significance, and how to characterise it. Students from all over campus, from students to faculty, attended the event. There were over 50 participants, all of whom actively participated.

Membership Drive
1 MEMBERSHIP
4 SOCIETIES + BENEFITS
Join MA

MATERIAL ADVANTAGE
IIT KANPUR

TALK ON
UNRAVELLING THE MISCONCEPTIONS BETWEEN MORPHOLOGICAL AND CRYSTALLOGRAPHIC TEXTURE

BY
PROF. RANJITH KUMAR RAY
Former Professor of MSE, IIT K

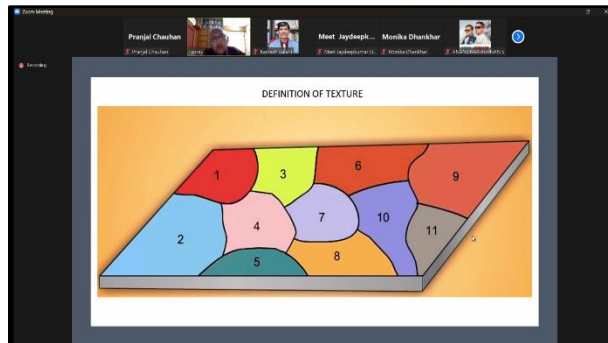
TUESDAY
27 SEPTEMBER

VENUE
ONLINE ZOOM MEETING

FOR REGISTRATION

For other information please visit the links below

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www.facebook.com/MaterialAdvantageIITK
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"QUO VADIS" TEXTURE?

Domine quo vadis? (1602)
by Annibale Carracci

08. Industrial Visit to SWASA on Sept 30, 2022

MA@IITK, organizes an industrial visit to SWASA (Naramau, Kanpur). This event was conducted so that everyone can understand that how industries work. We also get to know about E-Spinning and various machines.

MATERIAL ADVANTAGE
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#MembershipDrive

INDUSTRIAL VISIT
ON 30 SEPT 2022, 2PM ONWARDS

SWASA
(E-SPIN NANOTECH PVT. LTD.)
Spinning innovation into fibers

E-SPIN
NANOTECH

HURRY! LIMITED SEATS:
GET REGISTERED

REGISTRATION WILL BE BASED ON
FIRST-COME-FIRST SERVE BASIS

Official website: www.espinnanotech.com

JOIN MATERIAL ADVANTAGE
Active participants will be eligible to get membership discounts: up to 50%

CONTACT US - CHAIR: SHIVEN (7396634669)
www.iitk.ac.in/mse/materials/

CONNECT WITH US






09. Workshop on Scientific computing using MATLAB Oct 8, 2022

Speaker: Yogendra Jaiswara

Material advantage of IIT Kanpur has organised a workshop on “Scientific computing using MATLAB” as part of the Fall membership drive on 8 October. In the event the MATLAB was covered from the basics such as arrays, loop, plotting etc. The speaker Mr. Yogendra Jaiswara is a PhD student from dept. of Physics in IIT Kanpur. Due to the real-time code execution and doubt-resolution, students now have a better knowledge of the MATLAB. Additionally, students showed a desire to take part in related events. Current event drew 100+ participants from various departments and programs of IIT Kanpur.



MATERIAL ADVANTAGE
IIT KANPUR

MATLAB WORKSHOP


SCIENTIFIC COMPUTING USING MATLAB

Membership Drive
Sep 12 - Oct 18

**1 MEMBERSHIP
4 SOCIETIES • BENEFITS**

Join MA

- Array (1D,2D)
- Loops
- Plotting (1D,2D,3D)
- Differential equation (finite differentiation, spectral solver)
- Fourier Transform
- File reading & writing



JOIN US ON ZOOM ONLINE MEETING

Saturday
October 8th, 2022
11 AM - 1 PM

For other information please visit the links below

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www.iitk.ac.in/mse/materials

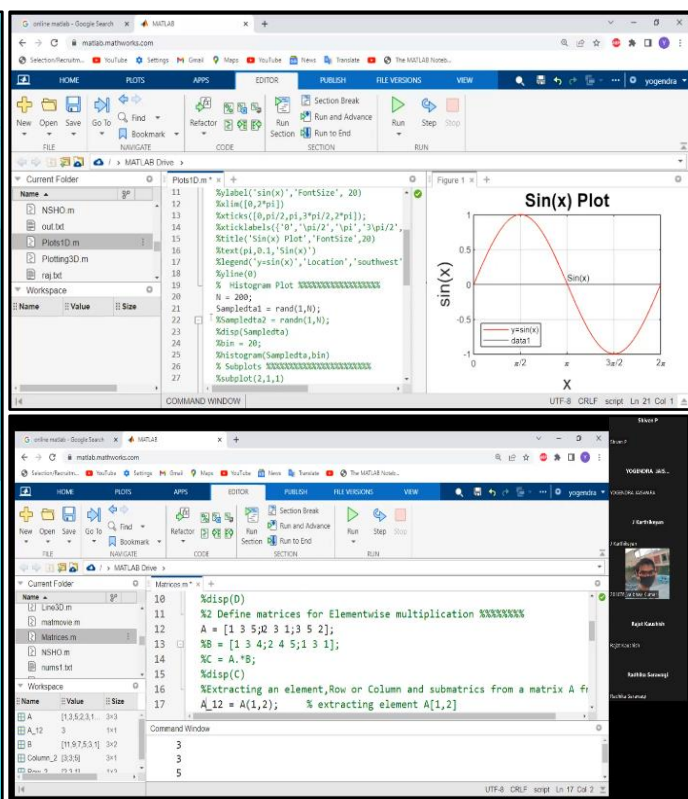
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For Registration





The top screenshot shows the MATLAB editor with a script for plotting a sine wave and a histogram. The code includes comments and function calls like `plot`, `hold on`, `histogram`, and `subplot`. The plot window displays a sine wave and a histogram.

The bottom screenshot shows the MATLAB editor with a script for matrix operations. The code includes comments and function calls like `rand`, `randi`, `randn`, `size`, `disp`, and `extracting an element, Row or Column and submatrix from a matrix A`. The command window shows the output of the script.

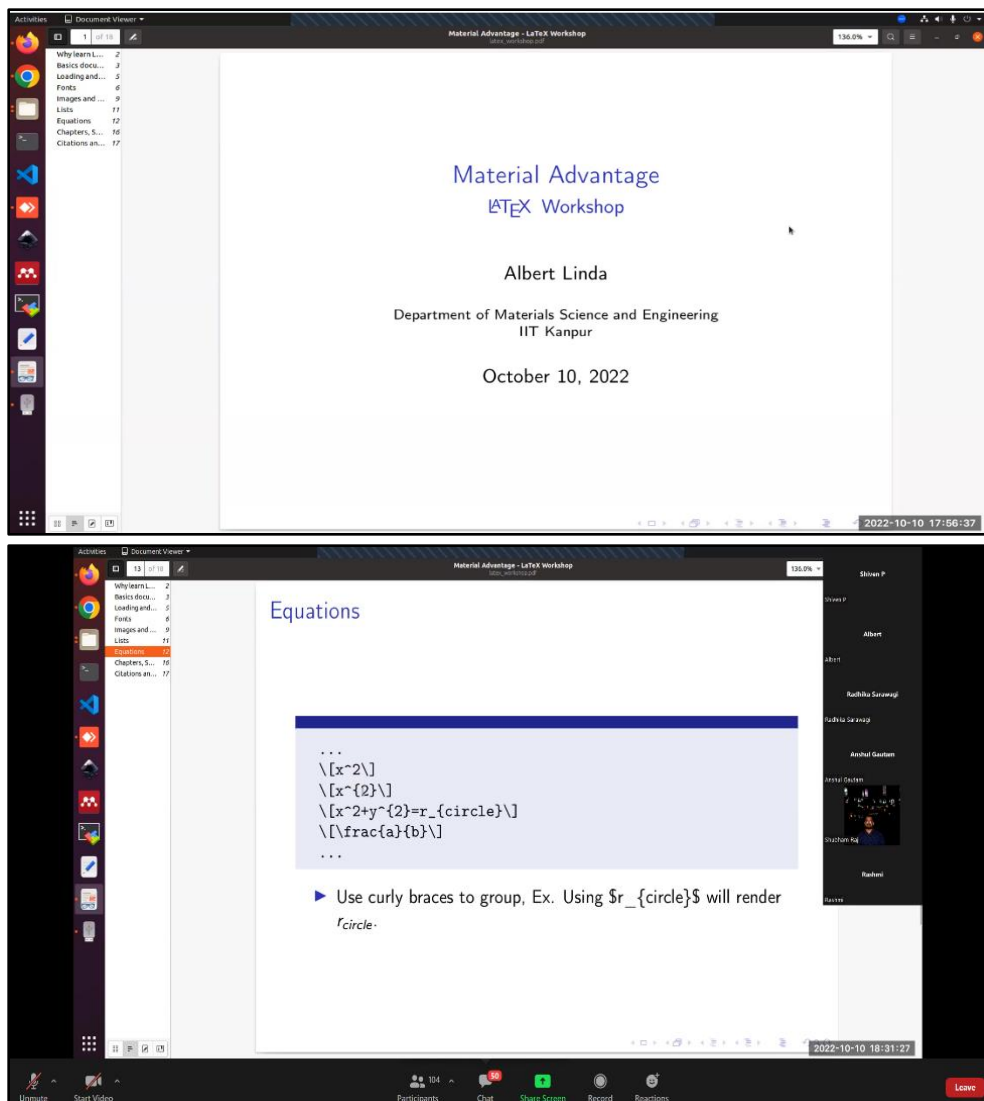
10. The Great MA Treasure Hunt Oct 9, 2022

During the membership drive on October 9, 2022, MA at IITK organised a treasure hunt. With over 70 registrations, the current event drew a lot of attention from the student fraternity. The event was then divided into three levels, with the first round consisting of a quiz. The quiz consisted of questions covering the fundamentals of physics, chemistry, and materials science. The top 25 students have advanced to the next round. Participants were given hints to find a place in college in the second round. In the final round, we have a fun event planned in which students are challenged with tasks that were majorly related to Material Advantage and its societies. The group that completed the treasure hunt tasks the quickest won Domino's pizza coupons worth Rs. 1200. Winners from the other rounds received MA@IITK mugs and keychains. All the members had a lot of fun and participated in such events.



11. **Workshop on LaTeX on Oct 10, 2022, Speaker: Albert Linda**

On 10 October, MA@ IIT K has organized a workshop LaTeX for the students of IIT Kanpur as part of the membership drive. LaTeX is the most common document preparation of software. The workshop covered from structure of basic document, loading and using packages, inserting math equations, citations and bibliography etc. The speaker Mr. Albert Linda is PhD student from Dept. MSE IIT Kanpur. The event was designed in such a way that both theoretical and real-time code execution was possible on overleaf. In this event more than 100 students have participated from various departments.



12. Placement Talks- Interaction with Alum on Oct 12, 2022

Speakers: Shruti Srivastava and Jatin Jain

As placement season approaches, Material Advantage at IIT K held an interactive session with alumni during their fall membership drive on 12 Oct. The interactive session has speakers Ms. Shruti Srivastava (HSBC) and Mr. Jatin Jain (HFCL) which is moderated by Mr. Shiven. Both have been part of the placement team during their masters. Speakers openly discussed their perspectives on placement-related starting from pattern of exam to strategies for core and analytics companies. Shared strategies for analytics and core companies. The event lasted for more than 1 hour with more than 20+ participants.



MATERIAL ADVANTAGE
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PLACEMENT TALKS
Interaction with Alum



Shruti Srivastava
Data Analyst, HSBC
Y20-M.Tech (Placement Coordinators) MSE, IIT-K



Jatin Jain
Materials Engineer, HFCL
Y20-M.Tech (Placement Coordinators) MSE, IIT-K

12 OCTOBER 2022
07:00 PM
VENUE: ZOOM ONLINE MEETING



Membership Drive
Sep 18 - Oct 18

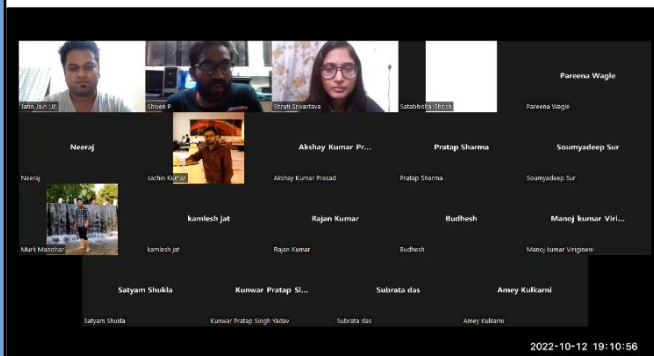
1 MEMBERSHIP
& SOCIETIES + BENEFITS

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13. Lab Tour for CSJM students at SEM and Biomaterial Processing in IIT Kanpur on Oct 14, 2022

On 14 October, Material Advantage IIT Kanpur chapter organized an outreach event for the students of CSJM Kanpur. The event was done in collaboration with the department of Materials Science and Engineering, IIT Kanpur. The students have visited the Scanning electron Microscopy (SEM) and Biomaterial processing and Characterization (BPCL) facilities of Dept. of MSE in IIT Kanpur. The facilities were demonstrated by trained PhD students of IIT Kanpur. Student's understandings expanded with the visit, esp. the SEM facility which they had studied in the class few weeks ago. Several other facilities were shown to the students in the Laboratory for Biomaterials. Some of them are the compression molding facility, the fretting wear testing facility, the contact angle goniometer, and the cell culture facility. Many of them expressed an interest in continuing their education after completing their bachelor's degrees. Students found it fascinating to

connecting their classes with demonstration during event. Many of them expressed a desire to participate in more such lab visits soon.



14. Talk on “Evolution of CFD as reliable and Efficient Tool” on Oct 15, 2022

Speaker: Nilesh.Gandhi

Material Advantage @IIT Kanpur organized a session on “Evolution of CFD as reliable and Efficient tool” on 15 October. We had an experience speaker Mr. Nilesh.Gandhi works at Reliance Industries as Group Lead, Modelling & Reaction Engineering. Mr Gandhi more than 20+ years of industrial experience and working with Computational Fluid Dynamics (CFD). The speaker shared the evolution of the CFD since 1995 to present and its applications in various industries such as aerospace, automobiles to bio-chemical. Later, highlighted discussed on the importance in mixing in chemical industries, heat transfer in boilers and phase separation in cyclone separator. A case study on

atomizer has also been discussed. The event lasted for about 1.5 hours and event ended with quires of the students.

Online Workshop

MATERIAL ADVANTAGE
IIT KANPUR

EVOLUTION OF CFD AS RELIABLE AND EFFICIENT TOOL

October 15th, 2022
Saturday
11:30 am

Membership Drive
Sep 12 - Oct 14
JOIN MA !!
1 MEMBERSHIP
4 SOCIETIES + BENEFITS



Lecturer:
Mr. Nilesh Gandhi
General Manager,
Reliance


- 20+ years of expertise in CFD (Aerospace, Automobile, Chemical Refinery & Petrochemical)
- Executive M.B.A. from Symbiosis Institute of Business Management
- Six sigma green belt certified
- CAE (FEA/CFD/EM) project management



SCAN ME

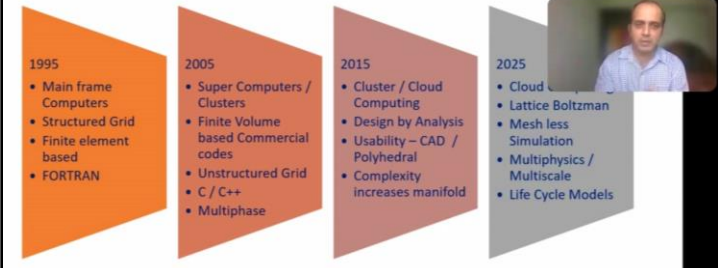
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Reliance
Industries Limited




Evolution of CFD as reliable and Efficient Tool

Nilesh Gandhi, October-2022



Year	Key Developments
1995	<ul style="list-style-type: none"> • Main frame Computers • Structured Grid • Finite element based • FORTRAN
2005	<ul style="list-style-type: none"> • Super Computers / Clusters • Finite Volume based Commercial codes • Unstructured Grid • C / C++ • Multiphase
2015	<ul style="list-style-type: none"> • Cluster / Cloud Computing • Design by Analysis • Usability – CAD / Polyhedral • Complexity increases manifold
2025	<ul style="list-style-type: none"> • Cloud • Lattice Boltzman • Mesh less Simulation • Multiphysics / Multiscale • Life Cycle Models



15. Closing ceremony of Membership Drive- Plantation Event on Oct 16, 2022

Closing of membership drive MA@IIT Kanpur was done by the plantation event. As we all are aware about the importance of plant in our life. MA members shows their enthusiasm for this and joined us for plantation.





16. E- helpdesk for membership

N MATERIALTM **ADVANTAGE**

The Student Program for Materials Science and Engineering

HOW TO JOIN MATERIAL ADVANTAGE???



Don't Worry!
MA@IITK team will Help You!!

MA@IIT Kanpur chapter also organizes help desk to assist the new students in the registration process, **October 14-16, 2022**. Our team created an online guide which helped the students to complete the process of becoming a member and joining this family. Google feedback forms were collected after each event and based on the response our team approached nearly 100 people over telephone and door to door publicity. Many students did not have credit cards to make the payment. In such cases,

the existing members volunteered to make the payment using their own cards. A google registration form was generated as the last step for completing the registration process for individual member to make a note of all the registered members and their MA IDs.

This year, ~26 new members joined MA@IITK and ~28 existing members renewed their membership. We managed to retain more than 50% existing members and recruited about 50% new members.